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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/131,051	08/07/1998	DWIGHT D. JAMIESON	NTL-3.2.035/	7277

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EXAMINER

DINH, DUNG C

ART UNIT PAPER NUMBER

2152

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/131,051

Applicant(s)

JAMIESON ET AL.

Examiner

Dung Dinh

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 7-10 and 15-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10, 15-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

PD

**DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/7/2005 has been entered.

***Response to Arguments***

Applicant's arguments filed 3/7/2005 have been fully considered but they are not persuasive because applicant argues distinctions between Rekhter and the present invention by citing to various portions of the specification without any specific tying to the claim language. As per the newly added limitation of the router information includes a unique IP address assigned to the router. The argument is moot in view of new ground of rejection below.

Art Unit: 2152

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

**Claims 1-4, 7-10, 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rekhter et al. US patent 6,339,595 and further in view of Viswanathan et al. "Evolution of Multiprotocol Label Switching", IEEE Communications Magazine, May 1998.**

As per claim 1, Rekhter teaches a virtual private network (VPN V) which enables private communication over a shared network (formed by PE1, P1, P2, & PE2 in fig.1) between at least two private networks (a private network at the CE1 end and another private network at the CE2 end - see col.6 lines 17-26) comprising:

a first router (PE1) coupled to the shared network and configured to dynamically distribute first router VPN information across the shared network [col.18 lines 27-37 where PE1 sends routing information (BGP message) to PE2] wherein the first router VPN information includes a VPN identifier [col.18 lines 35-37:

Art Unit: 2152

"VPN identifier V"] which is assigned to the first router.

(Apparent from col.6 lines 41-46 and col.18 lines 32-38: "the SP assigns a different VPN identifier to each of its customers' VPNs". Since PE1 is responsible for routing packets for VPN V, VPN V is implicitly assigned to PE1). The VPN information further includes a unique IP address assigned to the first router. (See col.9 lines 3-14, col.14 lines 30-32, col.16 lines 65-68 which indicate that PE1 has an IP address assigned to it; and col.17 lines 24-25 which indicates that BGP message uses TCP transport protocol. Since PE1 send out the BGP message and BGP message is send via TCP/IP, it is inherent that the BGP message would contain the IP address of PE1 as the source address of the BGP message.)

a second router (PE2) coupled to the shared network and configured to dynamically distributed second router VPN information across the shared network (inherent that a reciprocal BGP message would be send from PE2 to PE1 so that PE1 would know that PE2 is another edge router to VPN V via CE2);

wherein the VPN identifier assigned to the first router (VPN V) is the same as the VPN identifier of the second router (VPN V) [see col.18 lines 33-36: "16-bit identifier V"].

Rekhter does not teach the shared network being a MPLS network. Rekhter discloses using a "tag switching" network [col.9 lines 45-51]. However, Viswanathan discloses that Tag switching is

Art Unit: 2152

a prior technology to MPLS. Tag switching also does not have mechanism for multicast. MPLS is a rapidly emerging standard to enhance speed, scalability, and service provisioning capabilities in the Internet. [see abstract and p.170 col.2 "Prior Work"]. Hence it would have been obvious for one of ordinary skill in the art at the time of the invention to use MPLS network instead of tag switching with the teaching of Rekhter because it would have provided enhanced speed, scalability and service provisioning.

As per the limitation of establishing plural switched paths comprising multipoint-to-point and multipoint-to-multipoint, this is an inherent capability of the MPLS network [see Viswanathan page 170]. It is apparent that Rekhter system as modified would have the capacity to establish plural label switch paths as claimed. It would have been obvious for one of ordinary skill in the art to establish as many paths as necessary to enable each edge router of the VPN a path to other edge routers of the VPN and/or to provide redundancy for improve reliability. It would have been obvious for one of ordinary skill in the art to establish at least one multipoint-to-multipoint path so as to enable multicasting in the VPN.

As per claim 2, Rekhter teaches a private network adaptation device (CE1, CE2) connected to each of the routers (PE1, PE2 respectively).

Art Unit: 2152

As per claim 3, incorporating the adaptation device into the router would have been a matter of design choice. It would have been obvious for one of ordinary skill in the art to do so because it would have provided a more integrated solution, reducing the number of physical devices and connections.

As per claim 4, Rekhter teaches core routers in between [fig.1 PE1, P1, P2, PE2].

As per claims 15-16, the usage of label stacking to establish labeled switch paths is an inherent feature of MPLS network. [see Viswanathan p.168 col.2]. The processes recited are inherent in the operation of Rekhter system as modified.

As per claims 7-10 and 19-21, they are rejected under similar rationale as for claims 1-4 above.

As per claims 17-18 and 22, it would have been obvious for one of ordinary skill in the art to employ a best hop protocol to establish the labeled switch path because it would have provided a shortest path.

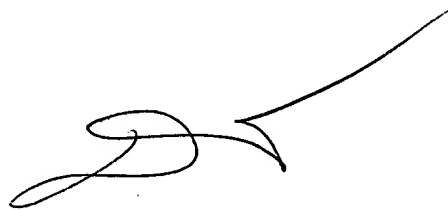
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Dinh whose telephone number is (571) 272-3943. The examiner can normally be reached on Monday-Friday from 7:00 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached at (571) 272-3949.

Art Unit: 2152

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Dung Dinh', with a long, sweeping horizontal line extending to the right.

Dung Dinh  
Primary Examiner  
June 10, 2005